

A FEW NEW BUTTERFLIES

(Lepidoptera, Rhopalocera)

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Parnassius evermanni Men., (race *thor* Hy. Edw.?), tr.
f. *kohlsaati*, new

The usual red color within the spotting on the upper and under sides of the secondaries is here a yellow. Classification: chromatism; color change, red to yellow.

Holotype ♂; expanse 53 mm., McKinley National Park, Alaska, June 27, 1931. Collected by Frank Morand of Los Angeles. Named after Mr. John E. C. Kohlsaas of Carpinteria, California. Type in author's collection. The colored illustration of *evermanni* Men. (Siemashko Russ. Faun., pl. IV, f. 5, 1849) is marked with a male sign and *wosnesenskii* Men. (Siemashko Russ. Faun., pl. IV, f. 6, 1849) is marked with a female sign. A dozen varietal names have been given to Asian deviations of this species. Mr. J. F. May of Kelwood, Manitoba, took a female *evermanni* in the Babine Range above Smithers, B. C., on July 20, 1931. This is a new southern locality for this species. He also took on July 26, 1931, *Melitaea mayi* Gun. (Bul. Brooklyn Ent. Soc., Dec., 1929, p. 327) in the same region which is another new record for British Columbia. This is the third consecutive season that Mr. May has collected this rather rare *Melitaea*, a good series being obtained last year from the type locality.

Parnassius clodius Men., tr. f. *dodgei*, new

Having the spotting of the secondaries a definite yellow instead of red. Classification: chromatism; color change, red to yellow.

Holotype ♂; expanse 63 mm., Santa Cruz Hills, Santa Cruz, California, June 15, 1923. Named after Mr. E. A. Dodge of Santa Cruz, California. Type in author's collection. An example of *dodgei* from Bear Valley, Marin County, just to the north, is illustrated on pl. 5, fig. 6, in Comstock's "Butterflies of

California." Mr. C. W. Herr of Priest River, Idaho, spent last summer collecting in the Salmon Mountain Ranges of south central Idaho, particularly near Mt. Hyndman, being about thirty miles from Lake Alturas, the type locality of *alturas* Dyar. In his long series in both sexes of *Parnassius* taken, all have yellow spots. Therefore *alturas* Dyar is a definite race of *clodius* and should be re-listed as such following Dyar's own check list. Dyar's *lapsus calami* in that list was his own locality given as Wyoming instead of Idaho.

Parnassius clodius Men., race *baldur* Edw.,
tr. f. *sulfureus*, new

On both upper and under sides of the secondaries all the spots are a bright yellow instead of red with no maculation change. Classification: chromatism; color change, red to yellow.

Holotype ♂; expanse 60 mm., allotype ♀; expanse 63 mm., Davis Creek, Modoc County, California, June 12, 1924, for male, and June 18, 1924, for female. Types in author's collection. *Binigrimaculella* Gun. should be synonymed under *lorquini* Oberth, because both represent immaculism under change of pattern.

Anthocaris sara Bdv., race *reakirtii* Edw.,
tr. f. *broweri*, new

Transition form *sternitzkyi* Gun. of race *reakirtii*, which is a color change under chromatism, red to yellow, is well illustrated by the colored plate in the January, 1925, *Ent. News*. A series of these are now to be found in various collections. *Broweri* represents albinism under color change through to white, the apical colored areas on both upper and under sides of the primaries being a natural pure white, in color like the rest of the wing, all white. Thus we now record a complete sequence of color change as follows: typical *reakirtii* having the usual red apical area *sternitzkyi*, the yellow apical area, and *broweri* reverting to a natural white area. No more names can be added under change of color, as the sequence is complete, it being improbable that violet, blue, etc., on up, can be added within the temperate habitat of this species and race. *Wrighti* Comst. represents melanifusism under change of pattern.

Holotype ♂ ; expanse 37 mm., Peanut Hill, Berkeley Hills, Alameda County, California, March 14, 1928. Named after Mr. David R. Brower of Berkeley, California. Type in author's collection.

Zerene eurydice Bdv., tr. f. *doudoroffi*, new

Similar in all respects to the typical yellow female, except that the color is white. Classification: albinism; change of color, yellow to white.

Holotype ♀ ; expanse 57 mm., Lake Alpine, Fairfax, Marin County, California, July 17, 1929. Named after Mr. M. Doudoroff of San Francisco. Type in author's collection. See "Review of the Genus *Zerene*" in the January, 1928, PAN-PACIFIC ENTOMOLOGIST. This name should be placed immediately following tr. f. *newcombi* Gun. of the "new listing" given on page 102 of that article. The recording of this name makes an interesting record, especially as more is becoming known about colors in certain genera.

Brenthis alberta Edw., tr. f. *banffensis*, new

Lacking the transverse black maculation through the discal area on both upper and under sides of the primaries, but retaining submarginal rows of spotting with cell spots reduced in appearance. Spotting of secondaries reduced in size. Classification: immaculism; change of pattern, example not final.

Holotype ♂ ; expanse 40 mm., Banff, Alberta, Canada, July 21, 1930. Collected by Mr. J. F. May of Kelwood, Manitoba, Canada. Type in author's collection.

Euphydryas chalcedona Dbldy. and Hew., race *colon* Edw.,
tr. f. *fenderi*, new

White spotting on both upper and under sides of both wings elongated through their interspaces. Looks like *chalcedona fusimacula* Barnes as illustrated by fig. 3 on pl. VII in the November, 1927, *Entomological News*. Tr. f. *mcdunnoughi* represents melanifusism and is illustrated with its description. Classification: albifusism; change of pattern, well developed degree, beneath especially.

Holotype ♂ ; expanse 43 mm., near McMinnville, Yamhill County, Oregon, May 29, 1931. Named after Mr. K. M.

Fender of that city, who recently published a list of local Oregon butterflies. Type in author's collection.

Euphydryas chalcedona Dbldy. and Hew., race *perdiceas* Edw.,
tr. f. *svihlæ*, new

Having the white elongated and fused spotting through the interspaces on both upper and under sides of both wings after the fashion of *chalcedona fusimacula* Barnes. *Nigrisuper-nipennis* Gun. represents melanifusism as illustrated with its description. Classification: albifusism; change of pattern, a well developed specimen, but not quite final.

Holotype ♀; expanse 50 mm., Hurricane Hill, Olympic Mountains, Washington, July 6, 1931. Named after Mrs. Ruth Dowell Svihla of Pullman, Washington. Type in author's collection. The Olympic Mountain *perdiceas* are very typical and match Holland's new illustrations in his Revised Edition of the Butterfly Book. I was particularly glad to get a series of Mrs. Svihla's specimens from that near-type locality.

Euphydryas chalcedona Dbldy and Hew., race *quino* Behr,
tr. f. *hennei*, new

Elongated white spotting through the interspaces as in *chalcedona fusimacula* Barnes. Classification: albifusism; change of pattern, fairly well developed only, primaries especially.

Holotype ♀; expanse 40 mm., Chino Canyon, Palm Springs, California, April 14, 1930. Named after Mr. Chris Henne of Pasadena, California. Type in author's collection.

Euphydryas anicia Dbldy and Hew., tr. f. *mayi*, new

Upper side having an outer marginal double-width border of red spots on both wings with balance of wings jet black, except the two red cell spots as usual on both wings. Under sides a solid red color on both wings except for faint transverse black lines through discal areas, marking an obscure former black maculation. A beautiful specimen looking like the colored illustration of the type of *editha beani blackmorei* Gun. Classification: melanifusism; change of pattern, a practically final grade of development.

Holotype ♂; expanse 37 mm., Banff, Alberta, Canada,

July 4, 1930. Taken by that ardent collector, Mr. J. F. May, of Kelwood, Manitoba, Canada. Type in author's collection.

Euphydryas anicia Dbldy. and Hew., race *hermosa* Wri.,
tr. f. *venusta*, new

As in race *maria* Skin. tr. f. *skinneri* Gun. which is illustrated with its description, this transition form has the white streaked spotting through the interspaces more noticeable on both upper and under sides of the primaries. Classification: albifusism; change of pattern, primaries developed to a greater extent.

Holotype ♀; expanse 50 mm., Cottonwood Canyon, above Roosevelt Camp, Roosevelt Dam, Arizona, July 29, 1930. Collected by Mr. Frank Morand of Los Angeles. Type in author's collection.

Plebeius aquilo Bdv., tr. f. *kohlsaati*, new

Having the submarginal row of five or six black spots elongated inwardly into long, dart-shaped points on the under side of the primaries. The under side of the secondaries having the white maculation slightly elongated inwardly also. Upper sides as usual. Classification: melanifusism; change of pattern, probably about final.

Holotype ♂; expanse 23 mm., Mt. McKinley National Park, Alaska, July 29, 1930. Collected by Mr. Frank Morand of Los Angeles and named after Mr. John E. C. Kohlsaatt of Carpenteria, California. Type in author's collection.

Plebeius sæpiolus Bdv., tr. f. *boharti*, new

Lacking all the usual spotting on the under sides except outer marginal row on both wings. Usual lunate cell spots in evidence. Upper sides as usual. Tr. f. *leussleri* Gun. represents melanifusism or the elongation of the black spotting, while this name represents lack of maculation, which is the opposite condition. These are the two and possibly only kinds of change of pattern transition forms to be found in the *Lycæninæ*. Classification: immaculism; change of pattern, final grade in type.

Holotype ♀; expanse 26 mm., Yosemite National Park, California, July 24, 1931. Collected by and named after Mr. R. M. Bohart of Berkeley, California. Type in author's collection.